

AMENDMENTS TO THE CLAIMS:

Kindly cancel claim 21, and amend claims 1, 2, 6, 10-14, 18, 20 and 23, as shown below.

This listing of claims will replace all prior versions and listings of claims in the Application:

Claim 1 (currently amended): A system for extending ~~interactivity~~ of a presentation markup language, the system comprising:

a collection of ~~designated elements defined using a markup language, the collection of designated elements comprising one or more predetermined~~ flow control elements for controlling statement flow of [[a]] web application, ~~each designated element expressed in an extended presentation language, each of the~~ flow control elements comprising:

a namespace for indicating that the flow control element is part of the collection of one or more flow control elements of the extended presentation markup language;
and

attributes for describing features of the designated element characteristics of the flow control element, wherein the namespace and the attributes are used to include an instance of the flow control element in the extended presentation markup language of the web application; and

a collection of associated instructions for performing functions to elements in the document object model, the instructions associated with the designated elements predetermined functions associated with each of the one or more flow control elements, the collection of predetermined functions comprising instructions for manipulating a document object model

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE,
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

(DOM) of the interactive web application based on the attributes of the instance of the flow control element in the DOM of the web application;

wherein the collection of predetermined functions associated with the instance of the flow control element allows the DOM of the web application to be interactively manipulated to allow the interactive web application to be expressed using the extended presentation markup language.

Claim 2 (currently amended): The system as claimed in claim 1, further comprising an initialization function for directing the processing of one or more ~~designated elements~~ in the ~~document object model~~, DOM, the initialization function having instructions for traversing each node in the ~~document object model~~, DOM, identifying one or more designated elements having names following a predetermined naming convention, the predetermined naming convention based in part on the namespace, and calling functions associated with the identified designated elements.

Claim 3 (cancelled).

Claim 4 (original): The system as claimed in claim 1, further comprising:

a collection of designated attributes applied to one or more of the document object model elements for applying passive behavior to objects in the web application; and

a collection of associated instructions for performing functions associated with the designated attributes.

Claim 5 (original) The system as claimed in claim 4, wherein the collection of designated attributes comprises one or more of:

a ‘drag’ attribute for specifying whether the element is movable by clicking and dragging it with the mouse;

a ‘pan’ attribute for specifying whether the element is immune to panning;

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE,
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
FAX. 520.882.7643

—
175 CANAL STREET
MANCHESTER, NH 03101
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FAX. 603.668.8567

a ‘zoom’ attribute for specifying whether the element is immune to zooming;
a ‘selected’ attribute for specifying whether the element has been selected; and
a ‘selectionGroup’ attribute for specifying an ‘id’ attribute of a <selection> element that this element is associated with.

Claim 6 (currently amended): The system as claimed in claim [[1]]2, wherein the ~~collection of one or more~~ designated elements further comprises one or more of:

- ❑ a coordinate mapping elements element for manipulating coordinates of objects in the web application;
- ❑ a behavior element[[s]] for manipulating viewer behavior with respect to the web application;
- ❑ a focus element for selecting a group of elements in the web application; and
- ❑ a constraint element for constraining manipulable attributes of an element in a web application.

Claim 7 (previously presented): The system as claimed in claim 1, wherein the flow control elements comprise one or more of:

- ❑ an if element for defining a simple conditional statement which, when it evaluates to true, results in its child elements being executed or rendered;
- ❑ a switch element for defining a conditional statement, and for comparing one value to other values defined in child <case> elements;
- ❑ a case element for defining the value to compare to a ‘value’ attribute of the switch element;
- ❑ a default element for containing action elements to be executed; and
- ❑ a loop element for defining a repeated sequence of actions.

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3450 E. SUNRISE DRIVE,
SUITE 140
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—
175 CANAL STREET
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Claim 8 (original): The system as claimed in claim 6, wherein the coordinate mapping elements comprise one or more of:

- a mousePosition element for defining a container for holding current mouse coordinates;
- a mapCoords element for defining an object used for mapping coordinates in one space to another space, via a polynomial transformation, whose coefficients are determined by the coordinates of point-pairs;
- a pointPair element for defining x-y coordinates for a same location in two different coordinate spaces; and
- a mapProj element for defining an object used for mapping coordinates in one projection system to another.

Claim 9 (original): The system as claimed in claim 6, wherein the viewer behavior elements comprise one or more of:

a zoom element for scaling a document by a factor;

a pan element for translating a document by an amount; and

a playSound element for playing an audio file.

Claim 10 (currently amended): A method of extending interactivity of a presentation markup language[[s]], the method comprising the steps of:

providing a collection of more or more predetermined flow control elements for controlling statement flow of [[a]] an interactive web application, the method expressed in the extended presentation language, each of the flow control elements comprising the steps of:

searching for a flow control element in a namespace for indicating that the element is part of a collection of elements of the extended presentation markup language; and

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE,
SUITE 140
TUCSON, AZ 85718
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FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

attributes for describing characteristics of the flow control element, wherein the namespace and the attributes are used to include an instance of the flow control element in the extended presentation markup language of the web application;
providing a collection of predetermined instructions associated with each of the one or more flow control elements;

parsing the web application expressed in the extended presentation into a document object model of the web application;

generating a function name associated with the flow control element;

calling the generated function name; and

processing child elements of the flow control element(DOM), the web application including one or more instances of the flow control elements; and

performing functions in the collection of predetermined instructions associated with elements in the DOM that follow a predetermined naming convention based on the attributes of the instance of the flow control element in the DOM of the web application to allow the DOM of the web application to be interactively manipulated to allow the interactive web application to be expressed using the extended presentation markup language.

Claim 11 (currently amended): A method of extending interactivity of a presentation markup language, the method The method as claimed in claim 10, further comprising the steps of:

searching in the DOM for a designated control element, having a name which follows a designated predetermined naming convention, in a document object model; and

calling a function, having a function name based on the naming convention, associated with the designated control element, the function name based on the predetermined naming convention and the designated element.

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE,
SUITE 140
TUCSON, AZ 85718
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Claim 12 (currently amended): The method as claimed in claim 11, wherein the step of searching includes the steps of:

traversing each node in the ~~document object model~~ DOM; and
for each node determining whether an element ~~the node~~ has a name which follows a designated the predetermined naming convention.

Claim 13 (currently amended): The method as claimed in claim 11, wherein the step of calling [[a]] the function includes the steps of:

dynamically generating [[a]] the function name associated with the designated element, based in part on the predetermined naming convention;
passing an object the node of the DOM associated with the designated element as a parameter of the generated function;
retrieving the attributes of the designated element from the passed node object; and performing a function stored in memory having the generated function name.

Claim 14 (currently amended): The method as claimed in claim 13, wherein the step of dynamically generating includes the steps of:

determining if the name of the designated element contains a designated prefix;
generating a function name comprising of the name of the designated element and the designated prefix; and
assigning an object the node of the DOM associated with the designated element as the parameter of the function; and
assigning predetermined instructions of the designated element as steps for the function to perform.

Claim 15 (original): The method as claimed in claim 11, wherein the step of calling a function includes the steps of:

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE,
SUITE 140
TUCSON, AZ 85718
TEL. 520.882.7623
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—
175 CANAL STREET
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TEL. 603.668.1400
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determining which script in a collection of scripts is associated with the designated element; and

calling the script.

Claim 16 (original): The method as claimed in claim 11, further comprising the steps of:
searching for a designated attribute in an element in a document object model; and
calling a script associated with the designated attribute.

Claim 17 (original): The method as claimed in claim 16, wherein the step of searching for a designated attribute comprises the steps of:

searching attributes of an element in a document object model;
determining whether an element attribute has a name which follows a designated naming convention.

Claim 18 (currently amended): The method as claimed in claim 16, wherein the step of calling a script includes the steps of:

determining if the name of the designated attribute contains a designated prefix;
generating a function name of the script comprising of the name of the designated attribute; and
assigning an object associated with the designated attribute as the parameter of the function name; and
~~assigning predetermined instructions of the designated attribute as steps for a function having the function name to perform.~~

Claim 19 (original): The method as claimed in claim 16, wherein the step of calling a script includes the steps of:

dynamically generating a function name associated with the designated attribute;

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—
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passing an object associated with the designated attribute as a parameter of the generated function name;
receiving the attributes of the object; and
performing a function stored in memory having the generated function name.

Claim 20 (currently amended): The method as claimed in claim 19, wherein the step of dynamically generating comprises the steps of:

determining if the name of the designated attribute contains a designated prefix;
generating a function name comprising of the name of the designated attribute; and
assigning an object associated with the designated attribute as the parameter of the function; and
~~assigning predetermined instructions of the designated attribute as steps for the function to perform.~~

Claims 21 and 22 (cancelled)

Claim 23 (currently amended): The method as claimed in claim 10, further comprising one or more of the following:

coordinate mapping of [[a]] the web application, the method comprising the steps of:
searching for a coordinate mapping element in ~~a document object model~~ the DOM of the web application;

generating a function name associated with the coordinate mapping element; and
calling the generated function name;
manipulating viewer behavior with respect to [[a]] the web application, the method comprising the steps of:

searching for a viewer behavior element in ~~a document object model~~ the DOM of the web application;

HAYES SOLOWAY P.C.
3450 E. SUNRISE DRIVE,
SUITE 140
TUCSON, AZ 85718
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FAX. 520.882.7643

175 CANAL STREET
MANCHESTER, NH 03101
TEL. 603.668.1400
FAX. 603.668.8567

generating a function name associated with the viewer behavior element; and
calling the generated function name;

focusing a group of elements in [[a]] the web application, the method comprising the steps of:

searching for a focus element in ~~a document object model~~ the DOM of the web application;

generating a function name associated with the focus element; and
calling the generated function name;

constraining manipulable attributes of an element in [[a]] the web application, the method comprising the steps of:

searching for a constraint element in ~~a document object model~~ the DOM of the web application;

generating a function name associated with the constraint element; and
calling the generated function name; and

applying passive behavior to an element of [[a]] the web application, the method comprising the steps of:

searching for a designated attribute of the element in ~~a document object model~~ the DOM of the web application;

generating a function name associated with the designated attribute; and
calling the generated function name.

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